

INTERNATIONAL SEARCH REPORT

international application No.
PCT/US98/11753

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :A61K 39/00, 38/00; A01N 37/18

US CL :424/198.1; 514/12, 2, 909, 866; 530/324

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/198.1; 514/12, 2, 909, 866; 530/324

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---- Y	US 5,280,014 A (COOPER et al.) 18 January 1994, see entire document.	1, 2 ---- 4-9, 11, 12, 14
X	US 5,175,145 A (COOPER) 29 December 1992, see entire document.	11, 12, 14, 15
X ---- Y	US 5,234,906 A (YOUNG et al.) 10 August 1993, see entire document.	11, 12, 14, 15 ---- 1-10, 13
X ---- Y	US 5,124,314 A (COOPER) 23 June 1992, see entire document.	11, 12, 14, 15 ---- 4

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
B earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 25 AUGUST 1998	Date of mailing of the international search report 24 SEP 1998
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer S. DEVI Telephone No. (703) 308-0196

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---- Y	WO 9640220 A1 (AMYLIN PHARMACEUTICALS, INC.) 19 December 1996, see entire document.	11-14 ² ---- 3, 10, 15
X ---- Y	KOLTERMAN et al. Effect of 14 days' subcutaneous administration of the human amylin analog, pramlintide (AC137) on an intravenous insulin challenge and response to a standard liquid meal in patients with IDDM. Diabetologia. April 1996, Vol. 39, No. 4, pages 492-499, see entire document.	11-15 ---- 1-10
X ---- Y	MOYSES et al. Modulation of gastric emptying as a therapeutic approach to glycaemic control. Diabetic Medicine. September 1996, Vol. 13, No. 5, Suppl. 1, pages S34-S38, see entire document.	11-15 ---- 1-10
X ---- Y	US 5,364,841 A (COOPER et al.) 15 November 1994, see entire document.	1-2 ---- 4, 9, 11, 12, 14
X ---- Y	KOLTERMAN et al. Reduction of postprandial hyperglycemia in subjects with IDDM by intravenous infusion of AC137, a human amylin analogue. Diabetes Care. August 1995, Vol. 18, No. 8, see abstract.	11-15 ---- 1-10
Y	LUTZ et al. Reduction of food intake in rats by intraperitoneal injection of low doses of amylin. Physiol. Behav. May 1994, Vol. 55, No. 5, pages 891-895, see entire document.	1-10
Y	WO 9220367 A1 (AMYLIN PHARMACEUTICALS, INC.) 26 November 1992, see entire document.	1-15
X ---- Y	COLBURN et al. Pharmacokinetics and pharmacodynamics of AC137 (25,28,29 tripro-amylin, human) after intravenous bolus and infusion doses in patients with insulin-dependent diabetes. J. Clin. Pharmacol. January 1996, Vol. 36, No. 1, pages 13-24, see entire document.	11-15 ---- 1-10
X, P ---- Y, P	THOMPSON et al. Effects of 4 weeks' administration of pramlintide, a human amylin analogue, on glycaemia control in patients with IDDM: effects on plasma glucose profiles and serum fructosamine concentrations. Diabetologia. November 1997, Vol. 40, No. 11, pages 1278-1285, see entire document.	11-15 ---- 1-10
X ---- Y	THOMPSON et al. Effects of pramlintide, an analog of human amylin, on plasma glucose profiles in patients with IDDM: Results of a multicenter trial. Diabetes. April 1997, Vol. 46, No. 4, pages 632-636, see entire document.	11-15 ---- 1-10

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P ---- Y, P	THOMPSON et al. Pramlintide: A human amylin analogue reduced postprandial plasma glucose, insulin, and C-peptide concentrations in patients with type 2 diabetes. Diabetic Med. July 1997, Vol. 14, No. 7, pages 547-555, see entire document.	11-15 ---- 1-10
X, P ---- Y, P	KOLTERMAN. Amylin and glycaemic regulation: A possible role for the human amylin analogue pramlintide. Diabetic Med. 13 June 1997, Vol. 14, Suppl. 2, pages S35-S38, see entire document.	11-15 ---- 1-10
Y, P	WEISER et al. The pharmacologic approach to the treatment of obesity. J. Clin. Pharmacol. June 1997, Vol. 37, No. 6, pages 453-473, see entire document.	1-10
X	NYHOLM et al. Acute effects of the human amylin analog AC137 on basal and insulin-stimulated euglycemic and hypoglycemic fuel metabolism in patients with insulin-dependent diabetes mellitus. J. Clin. Endocrinol. Metab. March 1996, Vol. 81, No. 3, pages 1083-1089, see entire document.	11-15
X	KONG et al. Infusion of pramlintide, a human amylin analogue, delays gastric emptying in men with IDDM. Diabetologia. January 1997, Vol. 40, No. 1, pages 82-88, see entire document.	11-15
X, P ---- Y, P	KONG et al. The effect of single doses of pramlintide on gastric emptying of two meals in men with IDDM. Diabetologia. May 1998, Vol. 41, No. 5, pages 577-583, see entire document.	11-15 ---- 1-10
X, P	SCHMITZ et al. Effects of amylin and the amylin agonist pramlintide on glucose metabolism. Diabetic Med. 13 June 1997, Vol. 14, No. 2, Suppl. 1, pages S19-S23, see entire document.	11-15
Y, P	US 5,656,590 A (RINK et al.) 12 August 1997, see entire document.	1-10
X, P ---- Y, P	US 5,686,411 A (GAETA et al.) 11 November 1997, see entire document.	11-15 ---- 1-10
X, P	US 5,739,106 A (RINK et al.) 14 April 1998, see entire document.	1-10
X, P ---- Y, P	ROWLAND et al. Potential role of neuropeptide ligands in the treatment of overeating. CNS Drugs. June 1997, Vol. 7, No. 6, pages 419-426, see entire document.	1 ---- 2-10
Y	MORLEY et al. Effects of amylin on appetite regulation and memory. Can. J. Physiol. Pharmacol. July 1995, Vol. 73, No. 7, pages 1042-1046, see entire document.	1-10

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	MORLEY et al. Amylin decreases food intake in mice. Peptides. July 1991, Vol. 12, No. 4, pages 865-869, see entire document.	1-10
Y	MORLEY et al. Modulation of food intake by peripherally administered amylin. Am. J. Physiol. July 1994, Vol. 267, No. 1 Pt. 2, pages R178-R184, see entire document.	1-10
A	LUDVIK et al. Amylin: history and overview. Diabet. Med. June 1997, Vol. 14, Suppl. 2, see abstract.	1-15
A	YOUNG et al. Preclinical pharmacology of pramlintide in the rat: Comparisons with human and rat amylin. Drug Dev. Res. 1996, Vol. 37, No. 4, pages 231-248, see entire document.	1-15

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

APS, MEDLINE, BIOSIS, EMBASE, WPIDS, CAPLUS, DIALOG, EUROPATFULL

Amylin, DAP, proamylin, AC137, AC-O137, pramlintide, IAPP, amylin agonist, obesity, diabetes, weight gain, overeating, eating disorder